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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,954	05/22/2006	Yuan-Yong Yan	P03096US2A (BJ001d)	9285

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Bridgestone Americas Holding Inc
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EXAMINER	
BOYLE, ROBERT C	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
06/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,954	YAN ET AL.	
	Examiner	Art Unit	
	ROBERT C. BOYLE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 8, 2009 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Pending claims are claims 1-3 and 21-25. Claims 4-20 and 26-35 have been cancelled.

3. Any rejections stated in the previous Office Action and not repeated below are withdrawn.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 25 recites "substantially random interpolymer..." The term "substantially" in claim 25 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoxmeier (US 6,258,891) in view of Inoue et al. (US 6,294,624).

9. As to claim 1, Hoxmeier teaches a method of making a polymer where a living polymer is reacted with a cyclic siloxane and to form a living block copolymer which can be functionalized with an amino group (abstract; column 1; lines 29-67; column 2, lines 4-41; column 3, lines 10-65; column 4, lines 20-46). Hoxmeier does not teach that the amino group has an active hydrogen on the amino nitrogen atom.

10. Inoue teaches the functionalization of a diene polymer with an amine compound where the amine compound has hydrogen atoms attached to it (abstract; column 2, lines 34-60; column 3, lines 45-54; column 4, lines 36-51; column 5, lines 1-25; column 9, lines 20-67; Table 2). It would have been obvious to use the amines of Inoue with the

method of Hoxmeier because Hoxmeier recites that amino compounds can be used as functional groups and Inoue teaches that amine functionalized polymers have a higher gel content, modulus elasticity, rolling resistance index and wet skid resistance index (Inoue: Table 2).

11. As to claims 2-3 and 21-23, Hoxmeier teaches hexamethylcyclotrisiloxane and octamethylcyclobutasiloxane (column 3, lines 10-31; column 4, lines 20-46).

12. As to claim 24, Hoxmeier teaches anionic living polymerization in a solution where the PE wax is the solvent (column 4, lines 20-46). Inoue teaches anionic living polymerization in a solution (column 9, lines 20-67).

13. As to claim 25, Inoue teaches the copolymer is a copolymer of butadiene and cyclooctadiene (column 9, lines 20-67) and Inoue teaches using butadiene and styrene copolymers (column 1, lines 11-13; column 7, lines 1-11).

14. Claims 1-3 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoxmeier (US 6,258,891) in view of Labauze et al. (US 5,811,479). The discussion with respect to Hoxmeier as set forth in paragraphs 8-13 above is incorporated here by reference.

15. As to claim 1, Hoxmeier teaches a method of making a polymer where a living polymer is reacted with a cyclic siloxane and to form a living block copolymer which can be functionalized with an amino group (abstract; column 1; lines 29-67; column 2, lines 4-41; column 3, lines 10-65; column 4, lines 20-46). Hoxmeier does not teach that the amino group has an active hydrogen on the amino nitrogen atom.

16. Labauze teaches functionalizing diene polymers with a cyclic siloxane followed by an amine with hydrogen atoms attached to the nitrogen atom (abstract; column 2, line 2-column 4, lines 7; column 4, line 62-column 5, line 19; column 8, line 46-column 11, line 5). It would have been obvious to use the amines of Labauze with the method of Hoxmeier because Hoxmeier recites that amino compounds can be used as functional groups and Labauze teaches the amino group gives increased hysteresis properties of the polymer (column 11, lines 1-3; Tables I-III).

17. As to claims 2-3 and 21-23, Hoxmeier teaches hexamethylcyclotrisiloxane and octamethylcyclobutasiloxane (column 3, lines 10-31; column 4, lines 20-46).

18. As to claim 24, Hoxmeier teaches anionic living polymerization in a solution where the PE wax is the solvent (column 4, lines 20-46). Labauze teaches anionic living polymerization in a solution (column 8, line 46-column 9, line 18).

19. As to claim 25, Inoue teaches the copolymer is a copolymer of butadiene and cyclooctadiene (column 9, lines 20-67) and Labauze teaches using butadiene and styrene copolymers (column 3, lines 41-67).

Response to Arguments

20. Applicant's arguments filed June 8, 2009 have been fully considered and are persuasive. The anticipation rejection over Labauze presented in the previous Office Action is withdrawn.

21. Applicant argues and submits a 132 Declaration by David Lawson stating that the copolymers of Labauze are quenched by reaction with a proton donor before reacted

with the amine compound. Given that, the 102 rejection over Labauze is withdrawn. However, for the reasons set forth in paragraphs 14-19 above, Labauze can still be legitimately applied in combination with Hoxmeier.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. BOYLE whose telephone number is (571)270-7347. The examiner can normally be reached on Monday-Friday, 9:00AM-5:00PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. C. B./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796